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A NEW NARCOTIC GENUS FROM THE AMAZON SLOPE OF THE COLOMBIAN ANDES

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RECENT ethnobotanical investigations in Colombia have greatly advanced our understanding of the narcotic and stimulant plants which are used in divination, witchcraft and medicine by the Indians of the region. The discovery, in the high and geographically isolated Indian village of Sibundoy, of a dangerously active narcotic tree, representing a new genus belonging apparently to the *Solanaceae*, may have significant consequences in several different fields of study.

In early 1942, whilst I was engaged in ethnobotanical studies in the Putumayo of Colombia, my attention was drawn to a most extraordinary tree which the Kamsá and Inga Indians of the Valley of Sibundoy cultivate for use as a narcotic. Flowering material was collected, an examination of which seemed to indicate that a new genus close to the *Brugmansia* group of *Datura* had been found. In the following years, I made several trips to Sibundoy and was able to gather additional material from the original and several adjacent trees; and colleagues, who have travelled in the area, have been kind enough to prepare specimens from still other trees both in the village of Sibundoy and the neighboring town of Santiago. In

1953, we were able finally to introduce the tree into cultivation in easily accessible gardens. Now, with plentiful material and after more than a decade of cautious consideration, I still hold that we have at hand an undescribed genus, the diagnosis of which is presented herewith.

Methysticodendron *R. E. Schultes gen. nov. Solanacearum.*

Arbor. Folia ligulata. Flores solitarii, maximi, penduli. Calyx longe tubulosus, herbaceus, spathaceus. Corolla profundissime quinquedivisa, lobis spathulatis, acuminatis. Stamina tubi apicem versus affixa, filamentis robustioribus, apicem versus attenuatis et valde contortis; antherae lineares, loculis parallelis introrsum longitudinaliter dehiscentibus. Ovula in quoque loculo numerosa, in placentis axillaria. Styli tres, liberi (sed aspectu singulares, mucilagine (?) cohaerentes, valde tortiles), crassiore filiformi-ligulati sed in sectione concavo-complanati, stigmatе indiviso, clavellato-tumescenti; ex ovarii parte centrali duo vel tres appendices, una filiformis, stylo subsimilis sed multo brevior atque una vel duae ad subulas brevissimas vel bullas reductae. Fructus non est praesto.

Genus apparenter *Datura* sectione *Brugmansia* satis affine est.

Generis nomen Graece “arbor somnifica,” inter indigenas usum perstringens, significat.

Generis species typica: *Methysticodendron Amesianum*.

Methysticodendron Amesianum *R. E. Schultes spec. nov.*

Arbor usque ad viginti quinque pedes alta, ramulis brevibus, dense foliatis. Folia membranacea, atroviridia, anguste lineari-ligulata, apice acuminata, basi sensim attenuata (saepissime sine petiolo distincto), margine vulgo

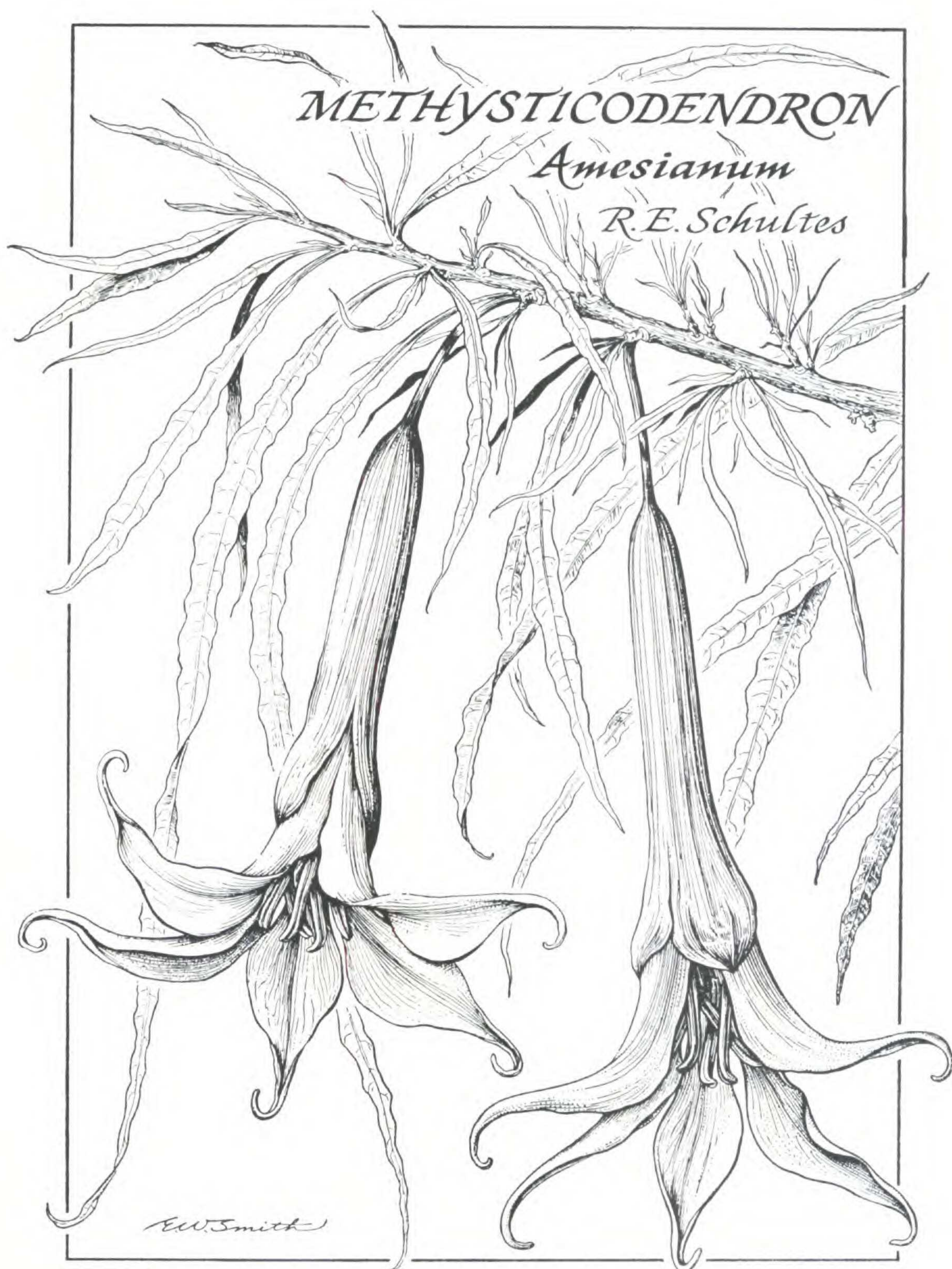
subundulata vel undulata, statu adulto 20–26 cm. longa, 1.3–2.0 cm. lata, nervo centrali robusto, subtus valde elevato, nervis secundariis subparallelis, subconspicuis, marginem versus arcuato-anastomasantibus, utrinque minute et irregulariter (venas versus densiore) pilosa. Flores usque ad 28 (plerumque plusminusve 23) cm. longi, apice in anthesi 10–13 cm. in diametro, solis occasu atque noctu fortissime et dulcissime fragrant. Calyx spathaceus, viridis, papyraceus vel membranaceus, duo- ad quinquefissus, dentibus acutis, per dimidium tubiformis, $\frac{3}{5}$ corollae longitudine (usque ad 13 cm. longus), utrinque minutissime et irregulariter pilosiusculus. Corolla $\frac{3}{5}$ – $\frac{4}{5}$ pro parte divisa, lobis saepissime quinque (sed abnormaliter quattuor vel sex), membranaceis, albis, patentibus, spathulatis vel subspathulate rhombiformibus, apice longe acuminatis, cinnabarinis, margine integris, dimidio superiore valde inflexis, 14–16 cm. longis, tubi apicem versus plerumque 6 mm. sed in parte latiore 2.5–3.3 cm. latis, basim versus utrinque remotissime et irregulariter pilosiusculis, tribus cum venis conspicuis, valde parallelis; tubus intus densiore albido-pilosus. Stamina saepissime quinque, corollae lobis breviora, filamentis teretibus, plusminusve 5 cm. longis, basi 2 mm. in diametro, apice valde contortis atque leviter tortilibus, apice excepto pilosiusculis, antheris flavis, 2.7–3 cm. longis, 3–4 mm. in diametro. Ovarium subcylindricum, conspicue trisulcatum, glabrum, usque ad 1.5 cm. longum, 0.5 cm. in diametro, in stylis sensim productum. Styli glabri, usque ad plusminusve 9 cm. longi, 2.5 mm. in diametro, apice paulo clavellati et valde complanati, stigmatibus textis in apice ipso et in marginibus usque ad 1–1.5 cm. decurrenti, nigro (siccitate) et papilloso. Appendix (stylus incohatus ?) ex ovarii parte centrali stylis similis, usque ad 5.5 cm. longa, ab una vel duabus appendicibus subclavellatis carnosius, 2–5 mm. longis comitata.

EXPLANATION OF THE ILLUSTRATION

PLATE I. METHYSTICODENDRON AMESIANUM *R. E. Schultes*. Habit drawing of a flowering branch, about one half natural size.

Drawn by ELMER W. SMITH

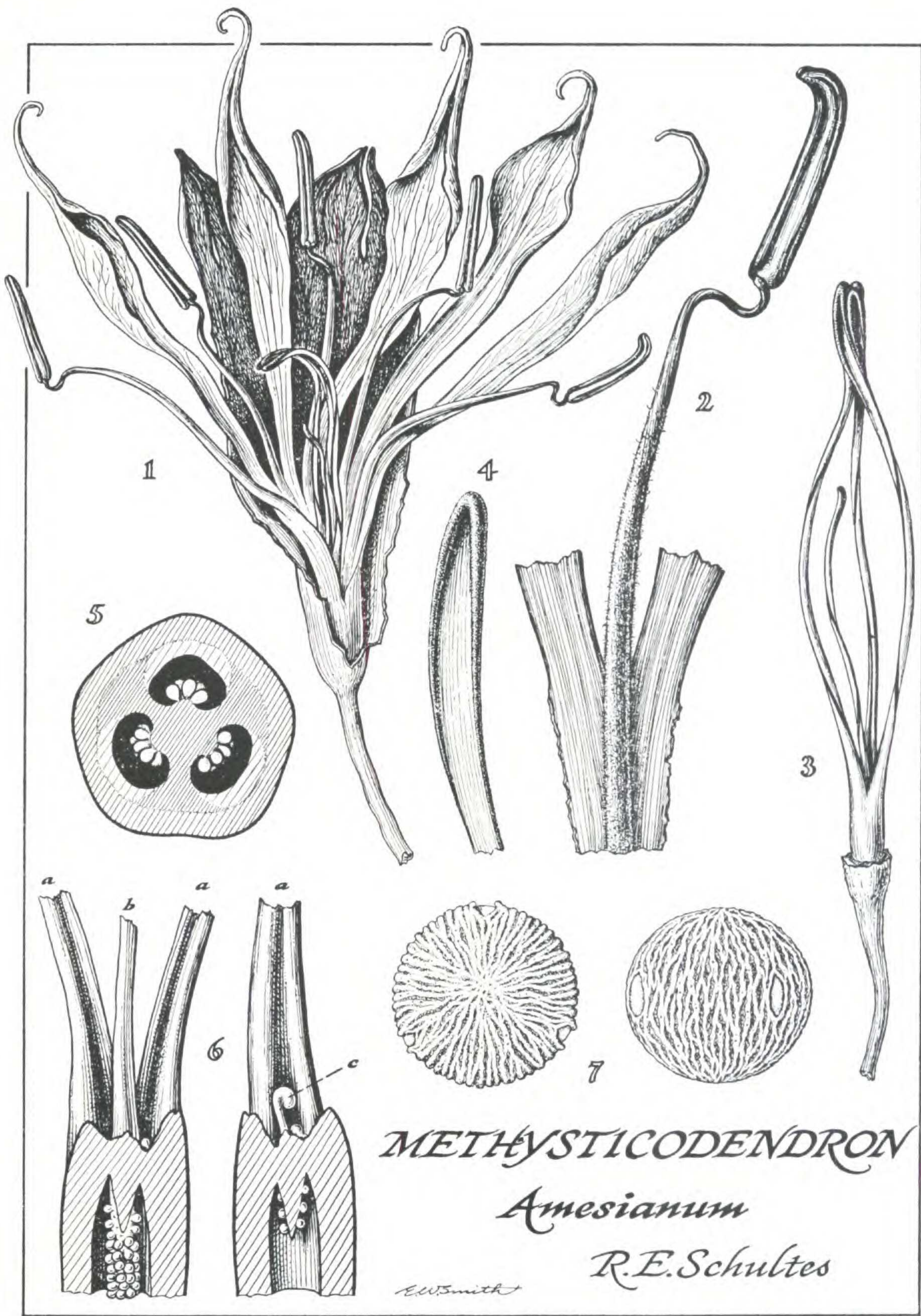
PLATE I



EXPLANATION OF THE ILLUSTRATION

PLATE II. METHYSTICODENDRON AMESIANUM *R. E. Schultes*. 1, partly dissected flower, about one half natural size, showing the relative sizes of stamens, styles and other floral segments. 2, a stamen and its attachment, slightly more than natural size. 3, the styles and the style-like appendage, about three quarters natural size. 4, the tip of a style showing the stigmatic surface, about three times natural size. 5, cross section of the ovary, about six times natural size. 6, sagittal section of the apical part of the ovary showing (a) styles, (b) the large appendage homologous with the styles and (c) one of the minute appendages arising from the central tissue of the ovary, about three times natural size. 7, pollen grains, about four hundred and fifty times natural size.

Drawn by ELMER W. SMITH

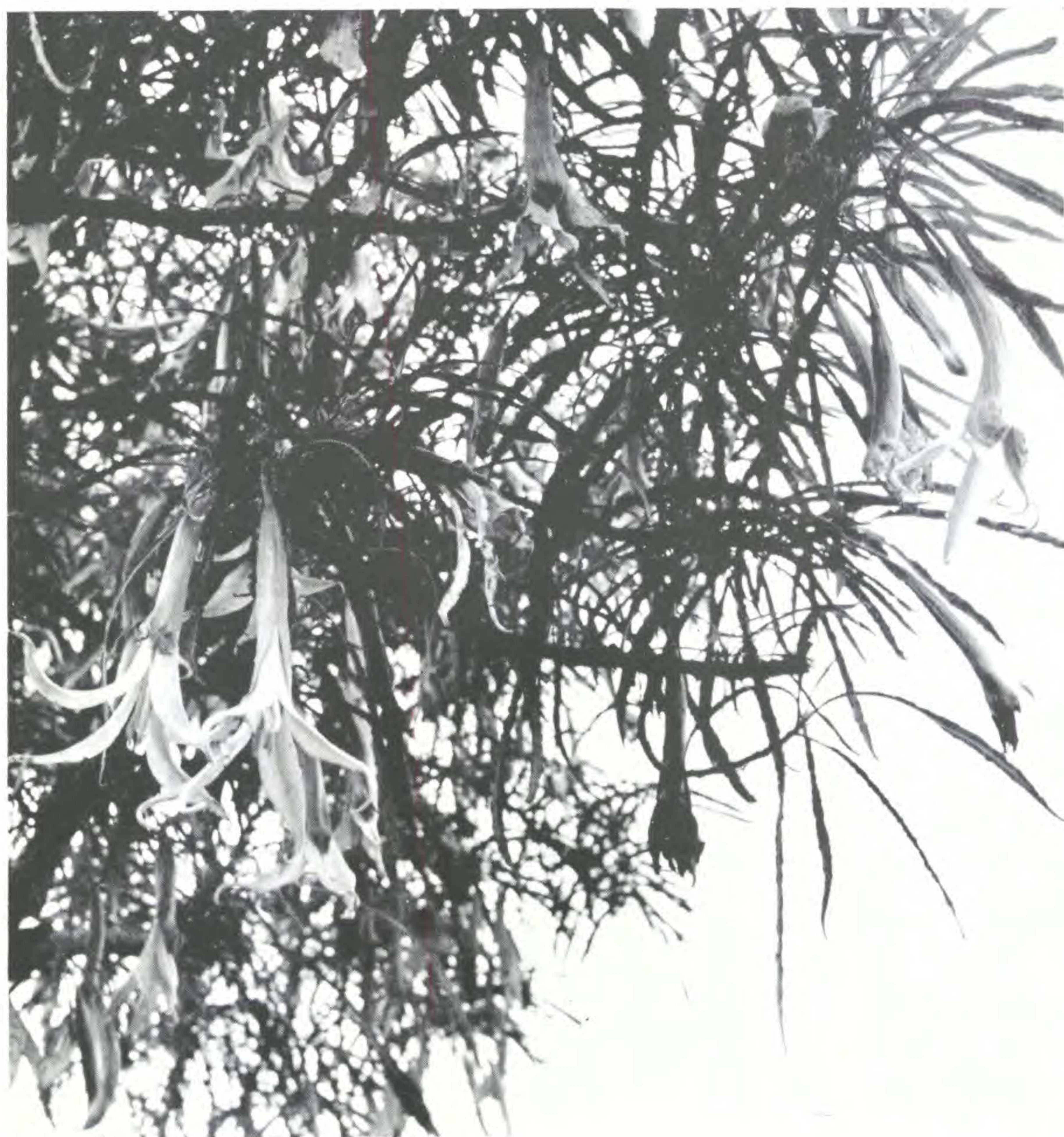


EXPLANATION OF THE ILLUSTRATION

PLATE III. Habit photograph of the plant from which the type of *Methysticodendron Amesianum* was taken. Sibundoy, Colombia.

Photograph by RICHARD EVANS SCHULTES

PLATE III



EXPLANATION OF THE ILLUSTRATION

PLATE IV. Kamsá Indian boy holding a flower of
Methysticodendron Amesianum. Sibundoy, Colombia.

Photograph by RICHARD EVANS SCHULTES

PLATE IV

